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PCT/EP2003/002198

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference 21590 WO-WN | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/EP2003/002198 | International filing date (day/month/year) 04 March 2003 (04.03.2003) | Priority date (day/month/year) 06 March 2002 (06.03.2002) |
| International Patent Classification (IPC) or national classification and IPC C01B 33/14, C09C 1/28, 3/00, C01B 13/32, 33/113 | | |
| Applicant ROCHE DIAGNOSTICS GMBH | | |

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| 1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36. |
| 2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet. <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of _____ sheets. |
| 3. This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application |

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|---|--|
| Date of submission of the demand 19 August 2003 (19.08.2003) | Date of completion of this report 27 February 2004 (27.02.2004) |
| Name and mailing address of the IPEA/EP Facsimile No. | Authorized officer Telephone No. |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Application No.

PCT/EP2003/002198

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☒ the description:
 pages _____ 1-26 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the claims:
 pages _____ 1-12 _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the drawings:
 pages _____ 1-9 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Application No.
PCT/EP 03/02198

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|--------|------|-----|
| Novelty (N) | Claims | 1-12 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | 1-12 | YES |
| | Claims | | NO |
| Industrial applicability (IA) | Claims | 1-12 | YES |
| | Claims | | NO |

2. Citations and explanations

This report makes reference to the following document:
D1 is not cited in the international search report. A copy of the document is appended.

D1: EP 0 658 525 A

- The prior art discloses the use of polyhalogenated metal alkylalkoxy compounds for producing water-repellent films (see D2, example 1) from which the subject matter of claim 1 differs in that the polyhalogenated metal alkylalkoxy compound is used together with the metal oxide precursor in a sol-gel process. The end product differs accordingly in that it has polyhalogenated compounds both within the particle and on its surface.

The subject matter of claims 1 to 8 is therefore novel (PCT Article 33(2)).

- The problem to be solved with the distinguishing feature (see point 1 above) can be regarded as that of developing a method with which hydrophobic and oleophobic dyes can be incorporated into metal oxide particles.

3.1 The solution as proposed in claim 1 of the present application involves an inventive step for the following reasons (PCT Article 33(3)):

The problem to be solved with the distinguishing feature cannot be derived from the available prior art.

3.2 The same arguments apply *mutatis mutandis* to claim 8, and this claim therefore also involves an inventive step.

4.1 Claims 2 to 7 are dependent on claim 1 and therefore also meet the PCT requirements with regard to novelty and inventive step.

4.2 Claims 9 to 12 are dependent on claim 8 and therefore also meet the PCT requirements with regard to novelty and inventive step.